

**REMARKS**

The Office Action in the above-identified application has been carefully considered and this amendment has been presented to place this application in condition for allowance. Accordingly, reexamination and reconsideration of this application are respectfully requested.

Claims 1-8 and 10-12 are in the present application. It is submitted that these claims were patentably distinct over the prior art cited by the Examiner, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. Changes to the claims, as presented herein, are not made for the purpose of patentability within the meaning of 35 U.S.C. sections 101, 102, 103 or 112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

Claims 1-6, 8, and 10-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya (U.S. Patent 6,175,772) in view of Lund et al. (Article entitled “Adaptive LEGO Robots”) and further in view of Taylor et al. (U.S. Patent 5,175,798).

The present claims now recite “changes the transition probability P in the probability automaton by calculating a new transition probability P” according to the following transition probability equations; wherein the transition probability is multiplied by an improvement ratio  $L_1$  if the stimulus detected by said stimulus detection means is evaluated as being good:

$$P'' = P \times (1+L_1) \quad (\text{where } 0 < L_1 < 1)$$

and by a lowering ratio  $L_2$  if the stimulus is evaluated as not being good:

$$P'' = P \times L_2 \quad (\text{where } 0 < L_2 < 1)$$

(Claim 1, Claims 11 and 12 contain similar limitations) These limitations are supported by the probability equations shown in steps S8 and S9 of Figure 6 and described on pages 15-16 of the specification.

The Examiner contends the newly added Taylor reference discloses “a training algorithm utilizing behavior probability multiplied by a punishment to reward ratio that can be adjusted according to an action success or failure” which meets the present invention’s transition probability equations. (Office Action page 4) Taylor’s probability equation 2 is provided at Column 4, line 4. This equation results in a distinctly different transition probability than the equations  $P'' = P \times (1+L_1)$  and  $P'' = P \times L_2$  recited in the claims of the present invention. Accordingly, Taylor fails to meet the specific probability equations required in the present claims.

Moreover, Applicants’ reassert that Lund’s behavior set is “implemented by a neural network” or “by a few lines of deterministic code.” (Lund, page 1021, second column, lines 9-12) As discussed in the specification, the present invention’s probability automaton is an alternative to the use of a neural network to configure a behavior model. (Specification page 4, lines 1-2) Hence, the present invention specifically distinguishes itself from models which are configured by neural networks as taught in Lund.

Accordingly, for at least these reasons, the combination of Kamiya, Lund, and Taylor fails to meet the present invention’s probability automaton and the rejected claims should now be allowed.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya, Lund, and Taylor in view of Wang et al. (U.S. Patent 6,646,541) The Examiner relies on Wang solely

to meet the present invention's speech recognition dictionary feature. However, like Kamiya, Lund, and Taylor, Wang fails to meet the present invention's probability automaton limitation for the reasons discussed above. Accordingly, the combination of Kamiya, Lund, and Taylor with Wang fails to obviate the present invention.

In view of the foregoing amendment and remarks, it is respectfully submitted that the application as now presented is in condition for allowance. Early and favorable reconsideration of the application are respectfully requested.

No additional fees are deemed to be required for the filing of this amendment, but if such are, the Examiner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account No. 50-0320.

If any issues remain, or if the Examiner has any further suggestions, he/she is invited to call the undersigned at the telephone number provided below. The Examiner's consideration of this matter is gratefully acknowledged.

Respectfully submitted,  
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